

REMARKS

Applicants hereby acknowledge the Examiner's removal of the finality of the previous rejection.

Claims 1-28 stand rejected under 35 U.S.C. 103(a) over McCreary (U.S. patent 3,532,179) in view of Holland, et al. (U.S. patent 6,280,546) and further in view of Berczi (U.S. patent 3,661,692). It is respectfully submitted that the rejection is incorrect and should be withdrawn. Nonetheless, the claims have been amended to clarify that the fabric base of the claimed materials comprises a woven fabric. Support for this amendment can be found throughout the specification, such as on page 3, line 31 of the original specification. The applied combination of references fails to teach or suggest the claimed materials.

The present invention claims an abrasion-resistant skirt material for use with air cushion vehicles having at least one air chamber, and also teaches a lightweight, abrasion-resistant sheet material. In each embodiment, the material comprises (a) a woven fabric base, comprising yarns of an ultra-high molecular weight polyethylene; (b) a bonding layer, comprising a thermoplastic material bonded to the fabric base; and (c) an outer layer, comprising a rubber compound bonded to the bonding layer. This structure is not taught or suggested by a combination of the cited references.

McCreary teaches a "curtain" that may be used with air cushion vehicles in a fashion similar to the "skirt" described by Applicants. As described at col. 7, line 70-col. 8, line 12 of McCreary, their curtain is formed from a thin, relatively non-stretchable material plastic material which may or may not include reinforcing strands molded into it. For example, the curtain may be made of Polyethylene film, Mylar® polyester film, thin rubber or the like, with nylon or other reinforcing threads molded into it to make it non-stretchable. In view of this disclosure, the Examiner concludes that McCreary teaches the

claimed limitations of a fabric base comprising yarns of polyethylene and a bonding layer, comprising a thermoplastic material bonded to the fabric base are taught. It is respectfully submitted that such is incorrect.

The flexible plastic film that McCreary teaches is not a woven fabric formed by weaving fibers or yarns. Furthermore, the bonding of nylon or other strong reinforcing strands with the plastic film does not render the material of McCreary a woven structure. Rather, McCreary provides a non-fibrous, non-woven polymer film that may be bonded with reinforcing strands. Importantly, McCreary also fails to teach or suggest a multilayer structure. Wherein films of McCreary are reinforced with threads or reinforcing strands, such material still comprises a single layer structure. Additionally, as the Examiner acknowledges, McCreary fails to teach a fabric formed from ultra-high molecular weight polyethylene. Accordingly, it is respectfully submitted that McCreary fails to teach or suggest elements (a) and (b) above, as the Examiner argues.

The Examiner has applied Holland, et al. for the purpose of illustrating yarns that are formed from ultra-high molecular weight polyethylene. It is respectfully submitted that Holland, et al is inapplicable both to the present invention as well as the McCreary reference. Particularly, the Holland, et al reference makes no mention of a potential use of their material for a hovercraft skirt. Rather, Holland, et al. relates to applications such as sail cloth, cargo container covers, side curtains for side-access trucks and bulk mail bags. Furthermore, Holland, et al does not pertain to structures having a rubber containing layer. Holland, et al pertains solely to a method for laminating a thermoplastic film to a high performance fabric, particularly without losing strength or degrading the high performance fiber. There is no teaching or suggestion or other appropriate nexus between Holland, et al. and McCreary allowing for the proposed combination of references. Accordingly, it is respectfully submitted that one skilled in the art would not look to Holland, et al. together with McCreary for the purpose of achieving the claimed invention.

The Examiner further acknowledges that McCreary fails to teach claimed element (c), i.e. an outer layer comprising a rubber compound bonded to the bonding layer. To fill this void, the Examiner applies Berczi. It is respectfully submitted that Berczi fails to overcome the deficiencies between McCreary and the claimed invention.

Berczi shows an apparently similar layering for hovercraft skirts, however, they do not teach an ultra-high molecular weight polyethylene as required by the present claims. In contrast, Berczi employs polypropylene which forms low molecular weight yarns. These would not have the puncture resistance of ultra-high molecular weight polyethylene. Most importantly, the present claims require a bonding layer comprising a **thermoplastic** material. Berczi does not teach a thermoplastic layer adhesive adjacent to his woven fabric layer. Rather, all of the materials mentioned by Berczi are **thermosets**. In this regard, please see column 3, lines 1, et seq. where Berczi's adhesive resins are all thermosetting rather than thermoplastic. Even when combined with optional rubbers, the overall composition is still thermosetting. Such thermosetting resins would not be useful for the present invention because their high thermosetting temperatures are well above the melting point of the ultra-high molecular weight polyethylene of the present claims. Heating at Berczi's temperatures would tend to destroy the integrity of Applicant's structure. Please note that the Berczi structure is formed by coating his fabric with his thermosetting adhesive, applying his uncured elastomer layer, and then vulcanizing the structure (see col. 2, lines 1-7) and (col. 3, lines 29-35). The Berczi layering components are therefore incompatible with those of this invention.

In establishing a *prima facia* case of obviousness under 35 U.S.C. 103, it is incumbent upon the Examiner to provide a reason why one having ordinary skill in the art would have been led to combine references to arrive at the claimed invention. The requisite motivation must stem from some teaching, suggestion or interest in the prior art as a whole or from knowledge generally available to one having ordinary skill in the art. See

Untroyed, Inc. v. Rudkin Riley, Corp., 837 F. 2d 1044, 5 USPQ 2d 1434 (Fed. Cir. 1988); *Ashland Oil, Inc. v. Delta Resin And Refractories, Inc.*, 776 F. 2d 281, 227 USPQ 657 (Fed. Cir. 1985).

Where Claimed subject matter has been rejected as obvious in view of prior art references, a proper analysis under 35 U.S.C. 103 requires consideration of two factors: (1) whether the prior art would have suggested to those of ordinary skill in the art that they should make the claimed composite or device or carry out the claimed process; and (2) whether the prior art would also have revealed that in so making or carrying out the claimed invention those of ordinary skill would have a reasonable expectation of success. See *In Re Dow Chemical Company* 837 Fed. 2d 469, 473, 5 USPQ 2d 1529, 1531 (Fed. Cir. 1988). Both the suggestions and the reasonable expectation of success must be found in the prior art, not in Applicant's disclosure.

Applicants respectfully assert that such a suggestion and/or reasonable expectation of success could not be found in the cited references. Neither McCreary, nor Holland, et al., nor Berczi, taken singularly or in combination, teach or suggest the claimed subject matter, as argued above. The Patent and Trademark Office Board of Appeals and Interferences stated the following in *Ex parte Clapp*, 227 USPQ 972 (1985), at page 973:

Presuming arguendo that the references show the elements or concepts urged by the Examiner, the Examiner has presented no line of reasoning, and we know of none, as to why the artist when viewing only the collective teachings of the references would have found it obvious to selectively pick and choose various elements and/or concepts from the several references relied on to arrive at the claimed invention. In the instant application, the Examiner has done little more than cite references to show that one or more elements or some combinations thereof, when each is viewed in a vacuum, is known. The claimed invention, however, is clearly directed to the combination of elements. That is to say, Applicant does not claim that he has invented one or more new elements but has presented claims to a new combination of elements. To support the conclusion of the claimed combination is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed combination where the

Examiner must present a convincing line of reasoning as to why the artist would have found the claimed invention to have been obvious in light of the teaching of the references.

With the above directives, consideration must be given as to whether the combination of references in the manner set forth in the Office Action is proper to render the Applicant's invention obvious in view thereof.

As set forth hereinabove, Applicant's respectfully assert that the references do not teach or suggest the combination as set forth in the claims, as is evident from the plurality of differences between Applicant's invention and the cited art. Again, the combination of references must teach the claimed combination to render Applicant's claimed invention obvious under 35 U.S.C. 103.

It is respectfully submitted that the Examiner has applied an improper standard of patentability. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Likewise, the belief that one skilled in the art could form the claimed multilayered film does not suggest that one should form such a film to obtain the disclosed benefits. The Examiner argues that sufficient motivation is present in the references to combine the McCreary, Holland, et al., and Berczi references to form a composite with high strength and durability. However, while said motivation is not present, in order to properly combine the references there must be motivation in the combined art to form such a material that achieves Applicant's intended goals, i.e. an abrasion-resistant material for use as a skirt for use with air cushion vehicles having at least one air chamber. Motivation for an intended desire is insufficient. In order to form a valid rejection the art must provide a motivation to take the specific action which the applicant have take toward achieving an intended goal. Motivation or desire to achieve a stronger skirt material for use with air cushion vehicles is insufficient. The examiner must present prior art which suggests

making the modifications made by the applicant toward achieving a skirt material for use with air cushion vehicles. This motivation simply is not present in the applied art.

It is respectfully submitted that the Examiner is reconstructing the art in light of Applicants' disclosure. The point in time that is critical for an obviousness determination is at the time the invention. "To imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher." *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983). Obviousness cannot be established by hindsight combination to produce the claimed invention. *In re Gorman*, 933 F.2d 982, 986, 18 USPQ2d 1885, 1888 (Fed.Cir.1991). It is the prior art itself, and not the applicant's achievement, that must establish the obviousness of the combination. It is urged that one skilled in the art would not be imbued with an inspiration to form the claimed structure and the materials with the claimed structural layers upon a reading of the McCrary, Berczi and Holland, et al references.

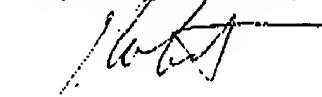
Applicants submit that the Examiner is looking beyond the teachings of the references and is imposing an improper "**obvious to try**" standard of patentability. In determining the differences between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious. *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983); *Schneck v. Nortron Corp.*, 713 F.2d 782, 218 USPQ 698 (Fed. Cir. 1983). It is respectfully asserted that the invention as a whole would not have been obvious to one of ordinary skill in the art at the time the invention was made.

Again, to support the conclusion of the claimed combination is directed to obvious subject matter, the references must expressly or impliedly suggest the claimed combination where the Examiner must present a convincing line of reasoning as to why the artist would have found the claimed invention to have been obvious in light of the teaching of the references. However, the Examiner has done little more than cite references to show that one or more elements or some combinations thereof, when each is viewed in a vacuum, is known. The Examiner has failed to show how Applicant's new combination of elements is obvious based on a combination of the applied references.

It is respectfully urged that one skilled in the art would not be imbued with an inspiration to form the claimed structure and the materials within the claimed structural layers upon a reading of the Berczi and Holland, et al references together with McCreary. For these reasons it is submitted that the rejection of claims 1-28 under 35 U.S.C. 103 over McCreary in view of Holland, et al. and further in view of Berczi should be withdrawn. Such action is requested.

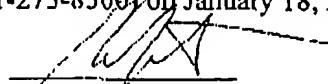
The undersigned respectfully requests re-examination of this application and believes it is now in condition for allowance. Such action is requested. If the Examiner believes there is any matter which prevents allowance of the present application, it is requested that the undersigned be contacted to arrange for an interview which may expedite prosecution.

Respectfully submitted,



Richard S. Roberts
Reg. No. 27,941
P.O. Box 484
Princeton, New Jersey 08542
(609) 921-3500
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I hereby certify that this paper is being facsimile transmitted to the United States Patent and Trademark Office (FAX No. 571-273-8300) on January 18, 2006.


Richard S. Roberts
Reg. No. 27,941